

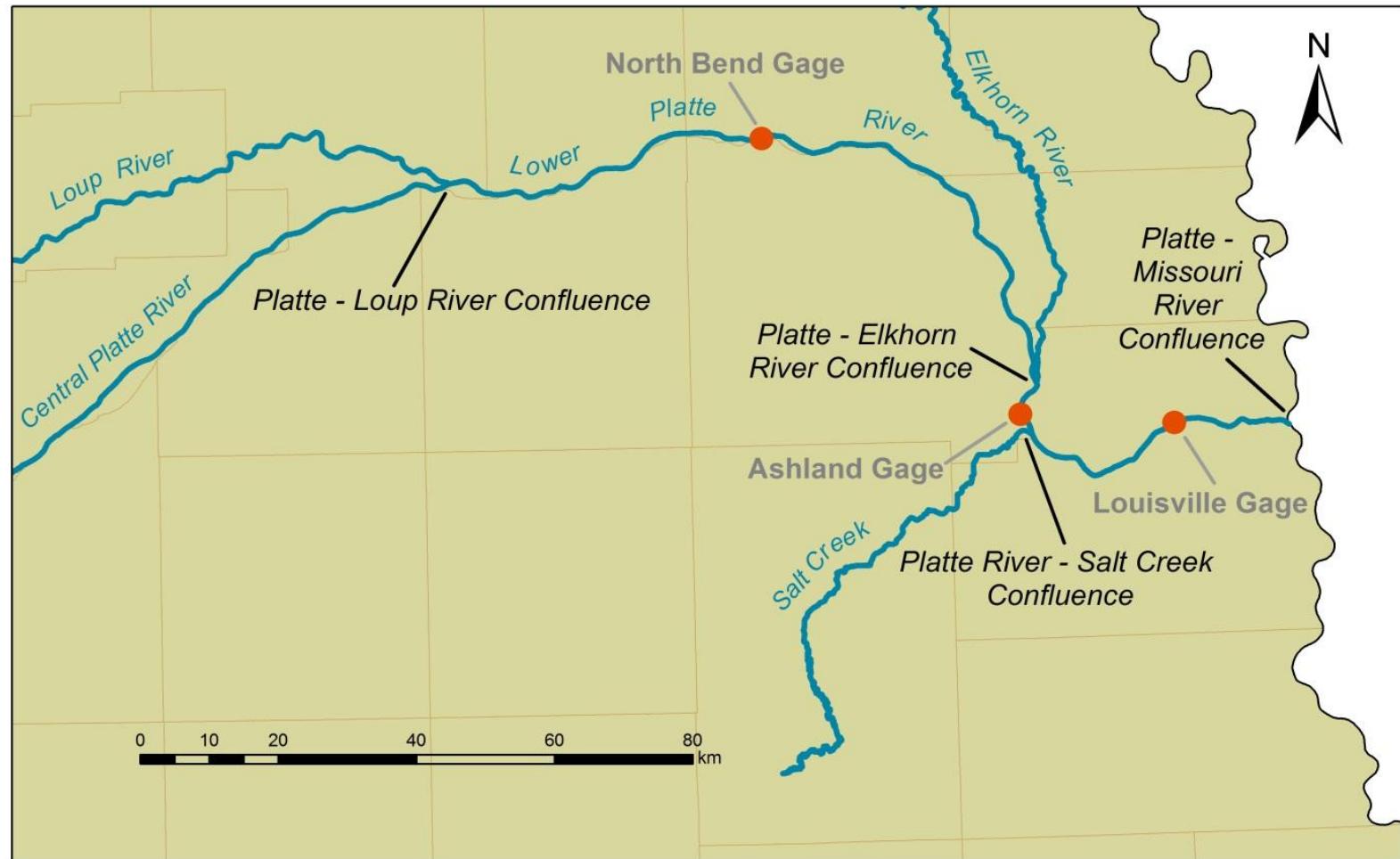


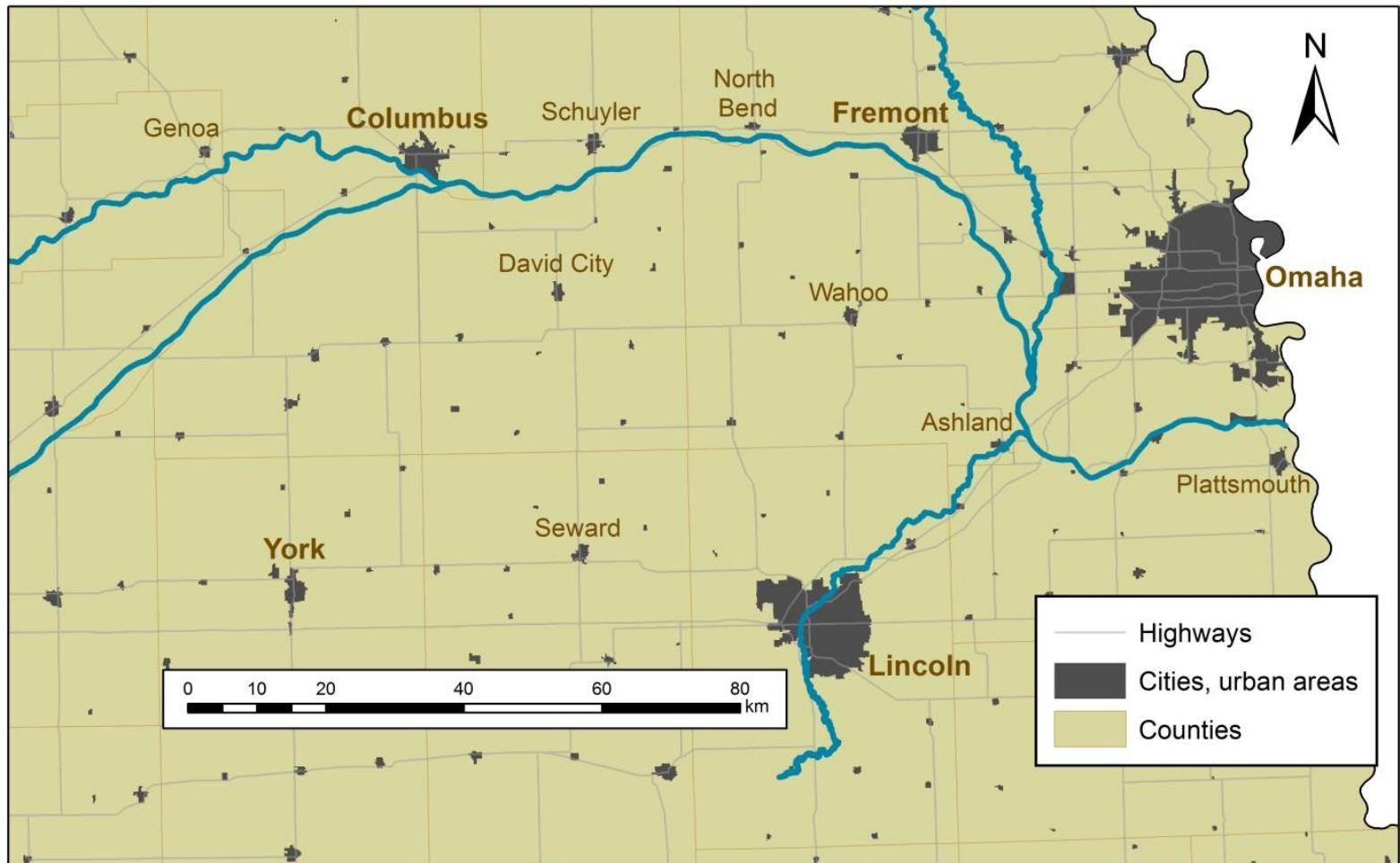
## Nebraska – Lower Platte River



Mary Bomberger Brown  
Joel G. Jorgensen  
Lauren Dinan

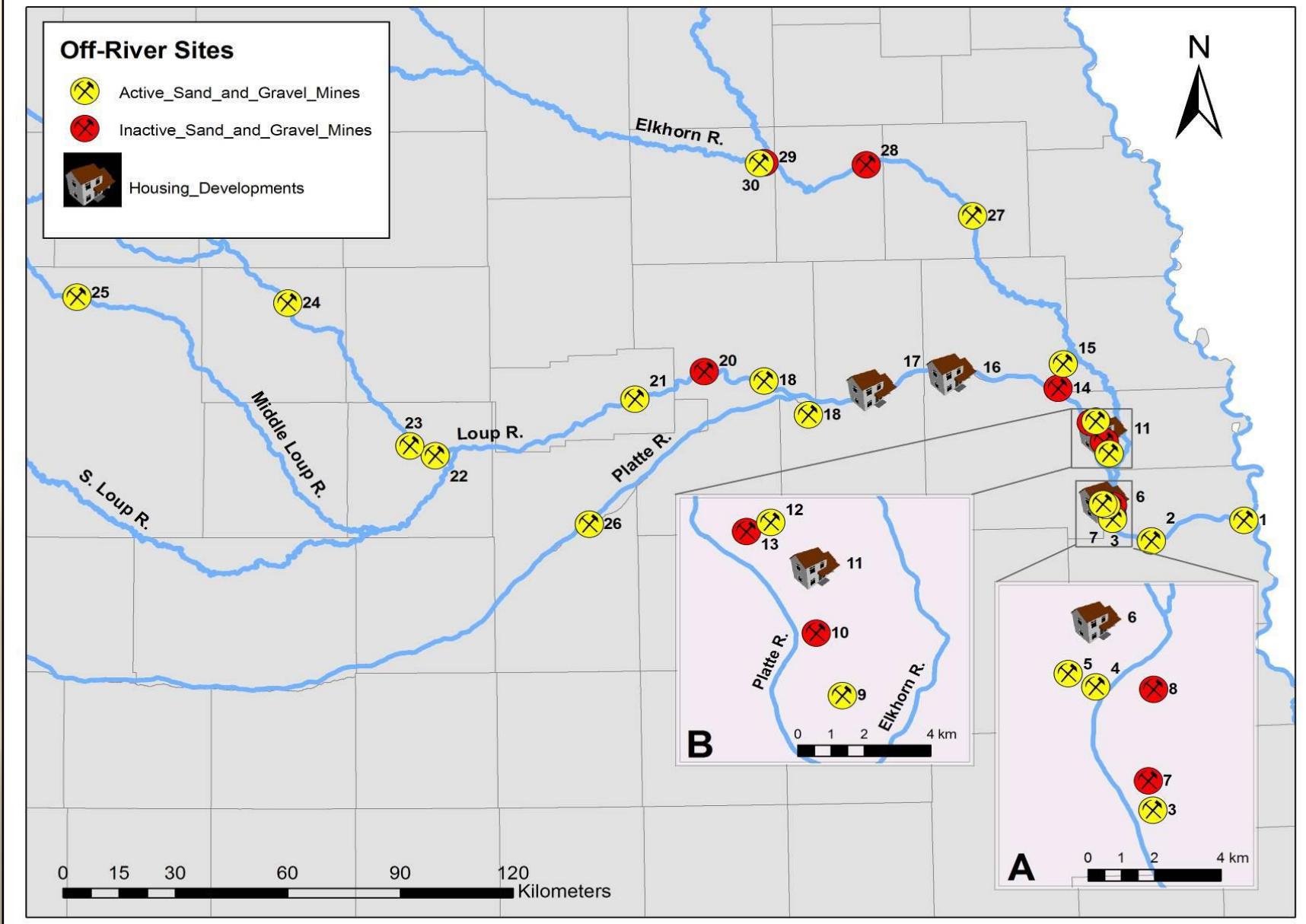






## Off-River Sites

- (Yellow X) Active\_Sand\_and\_Gravel\_Mines
- (Red X) Inactive\_Sand\_and\_Gravel\_Mines
- (House icon) Housing\_Developments



## Key Habitat Features



# Sand and Gravel Mines



# Lake Shore Housing Developments

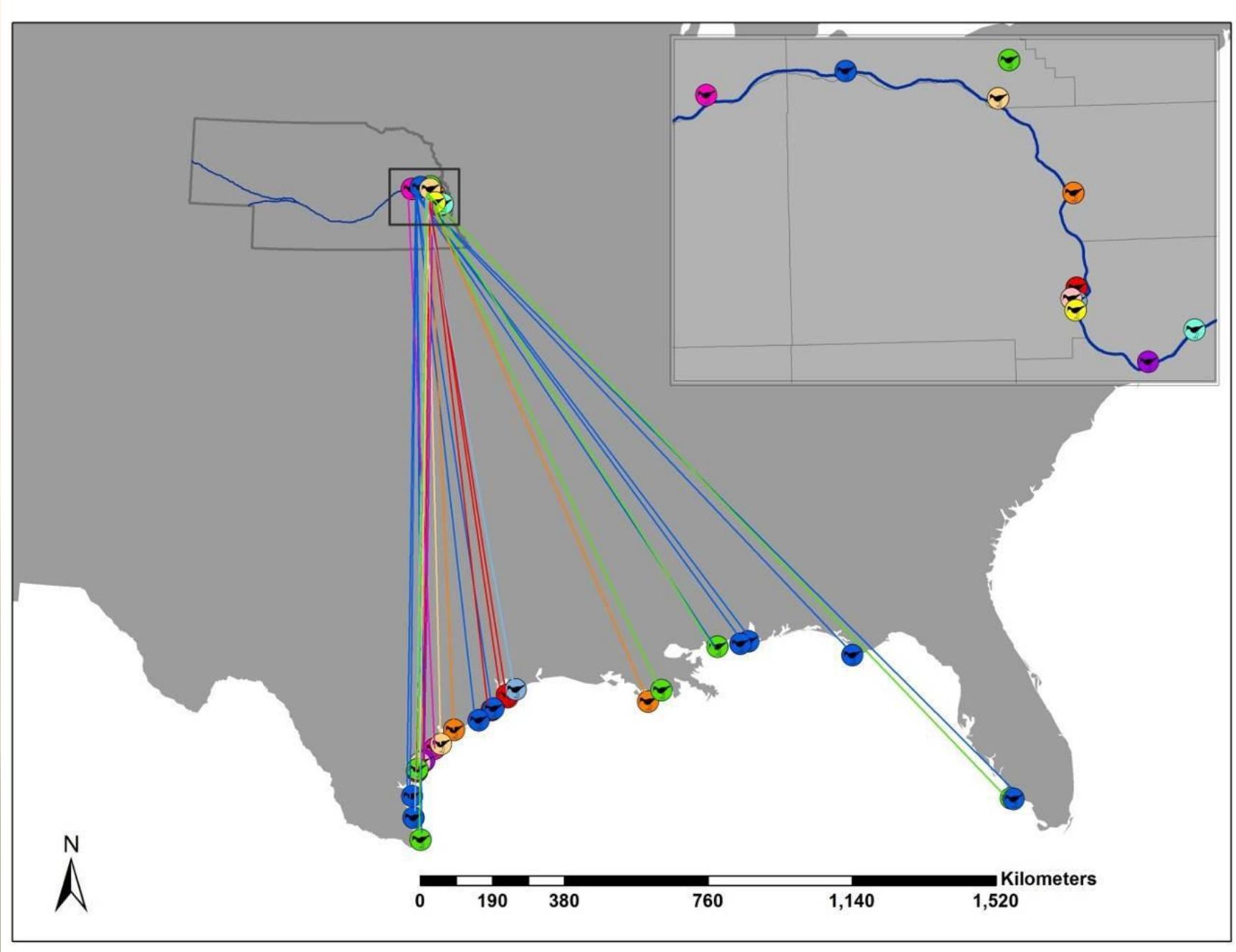


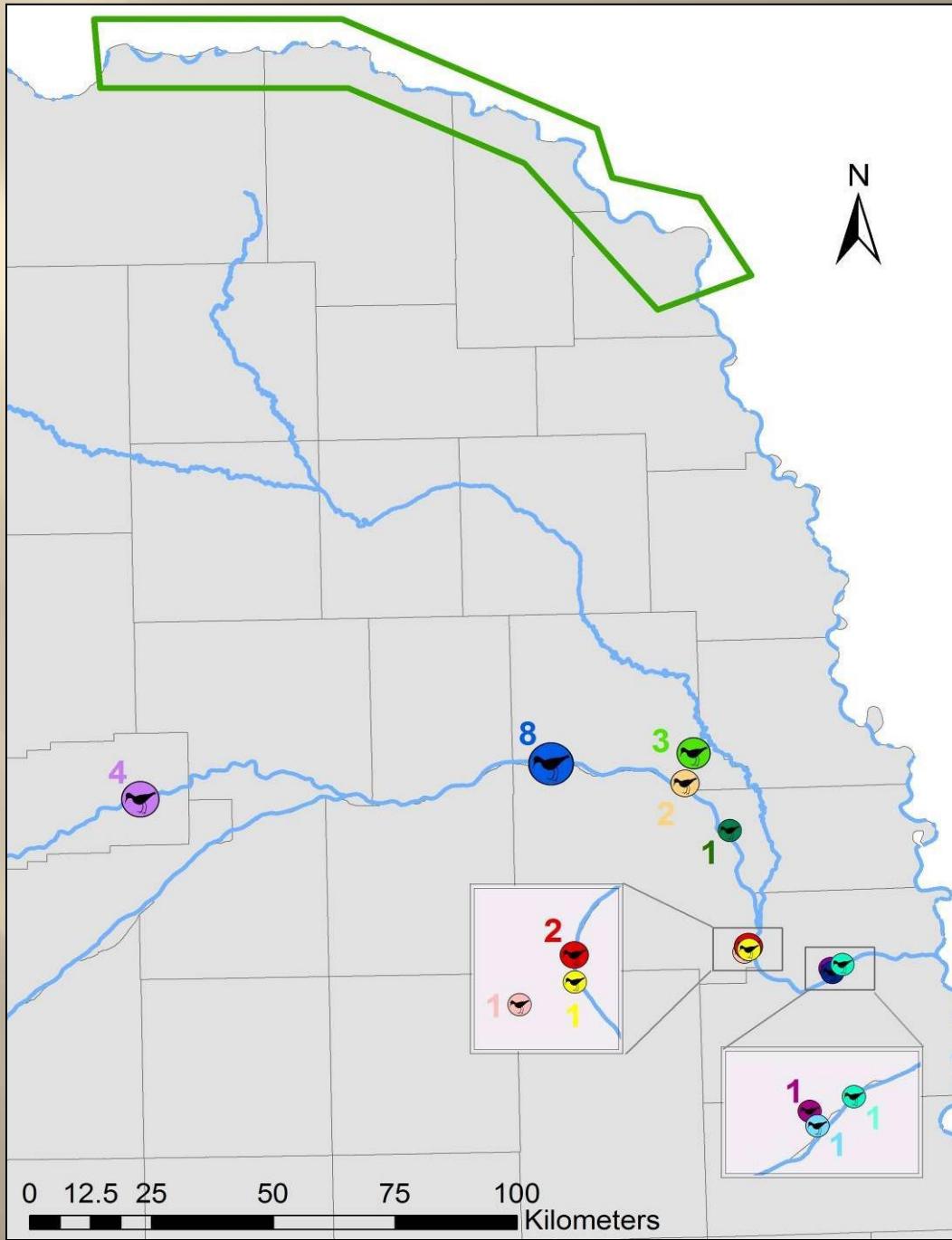
# Midstream River Sandbars

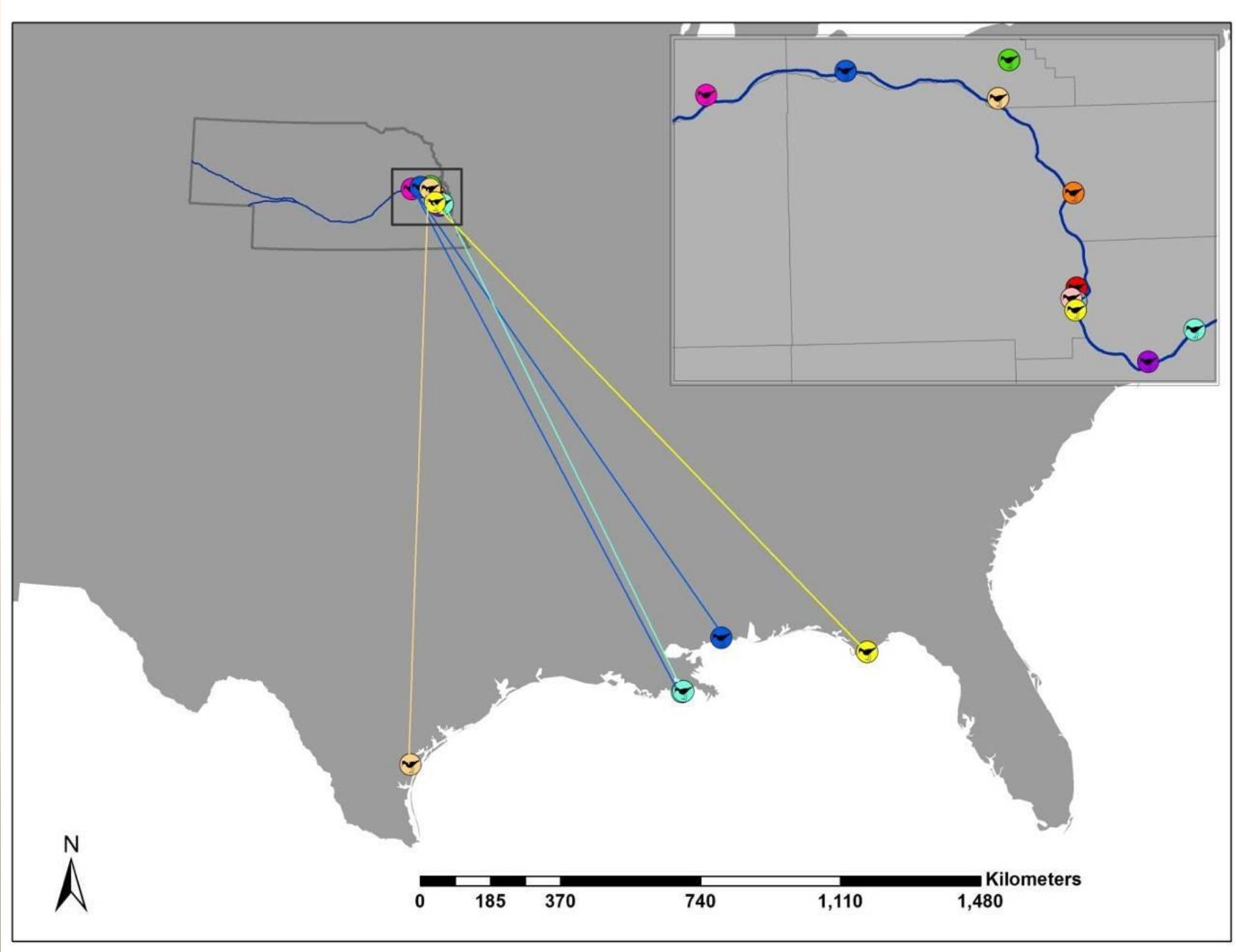


# Northern Great Plains Piping Plover Population









# Abundance

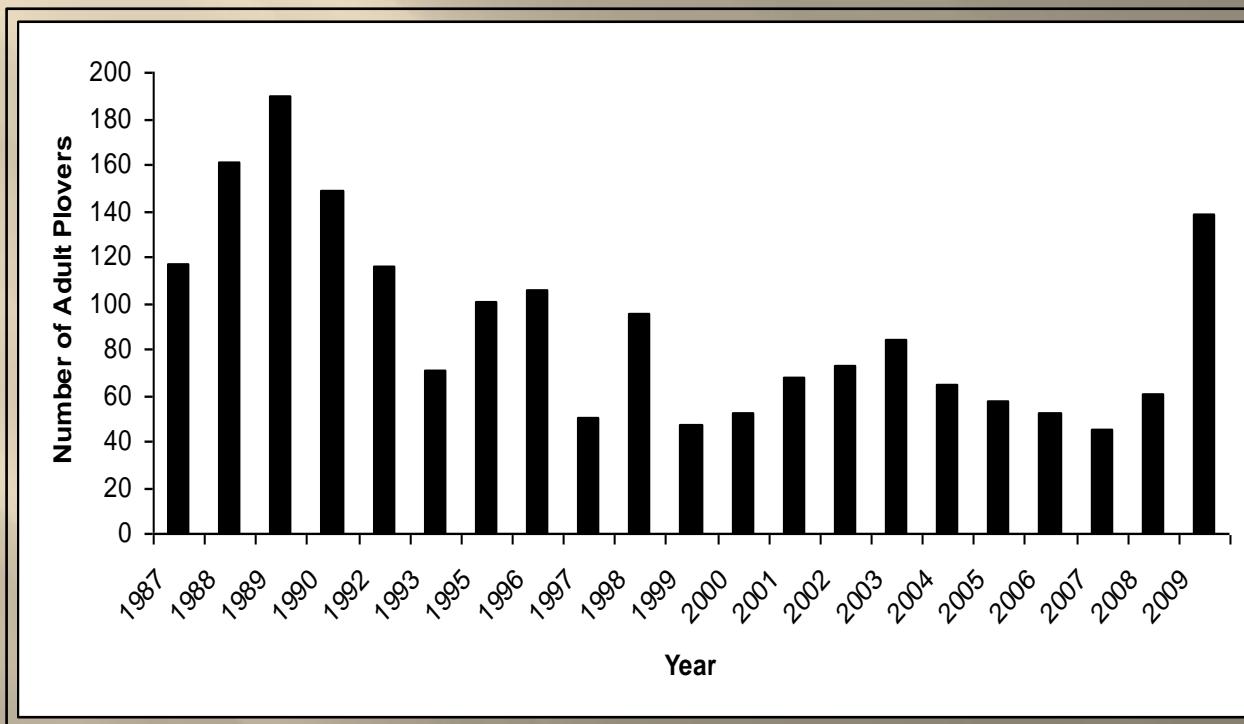
# adults

# nests

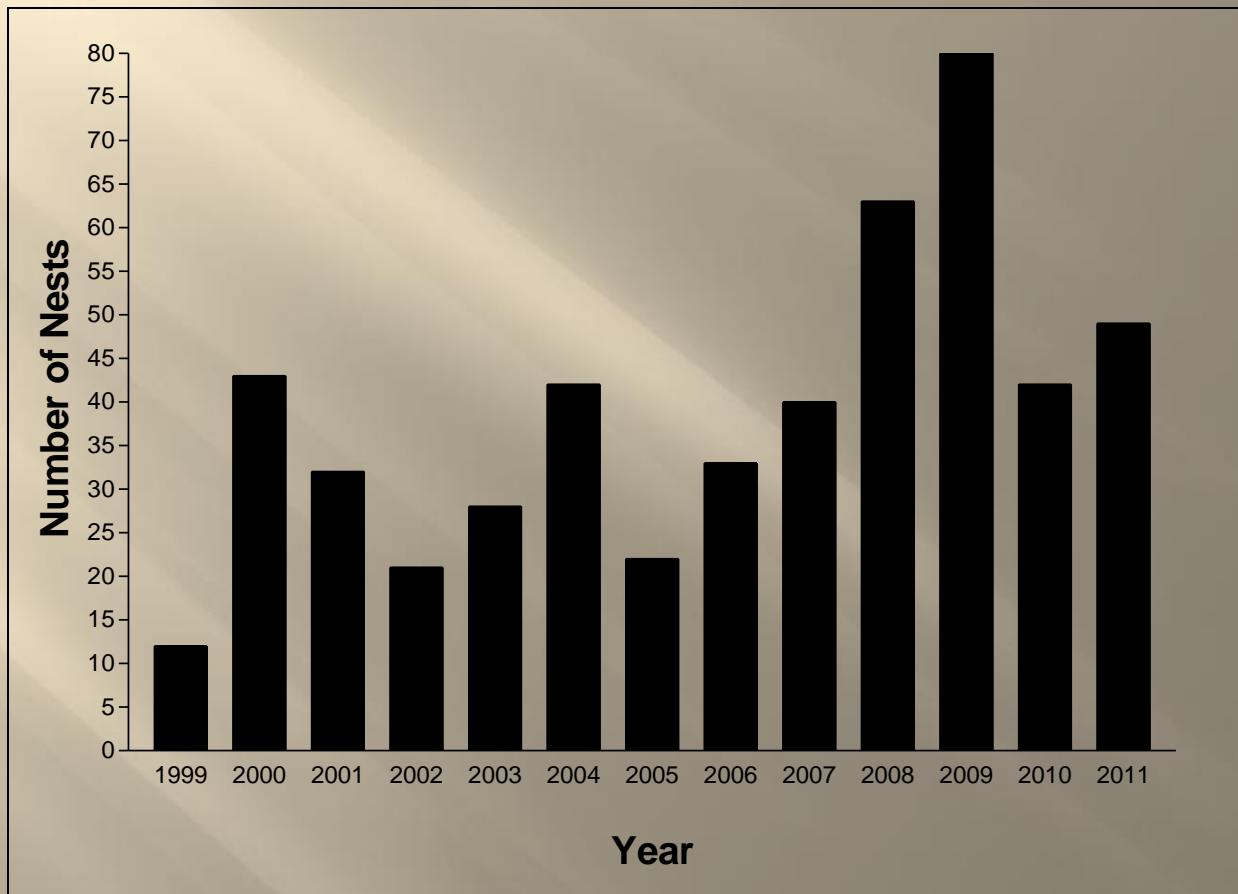


## Abundance: number of adults

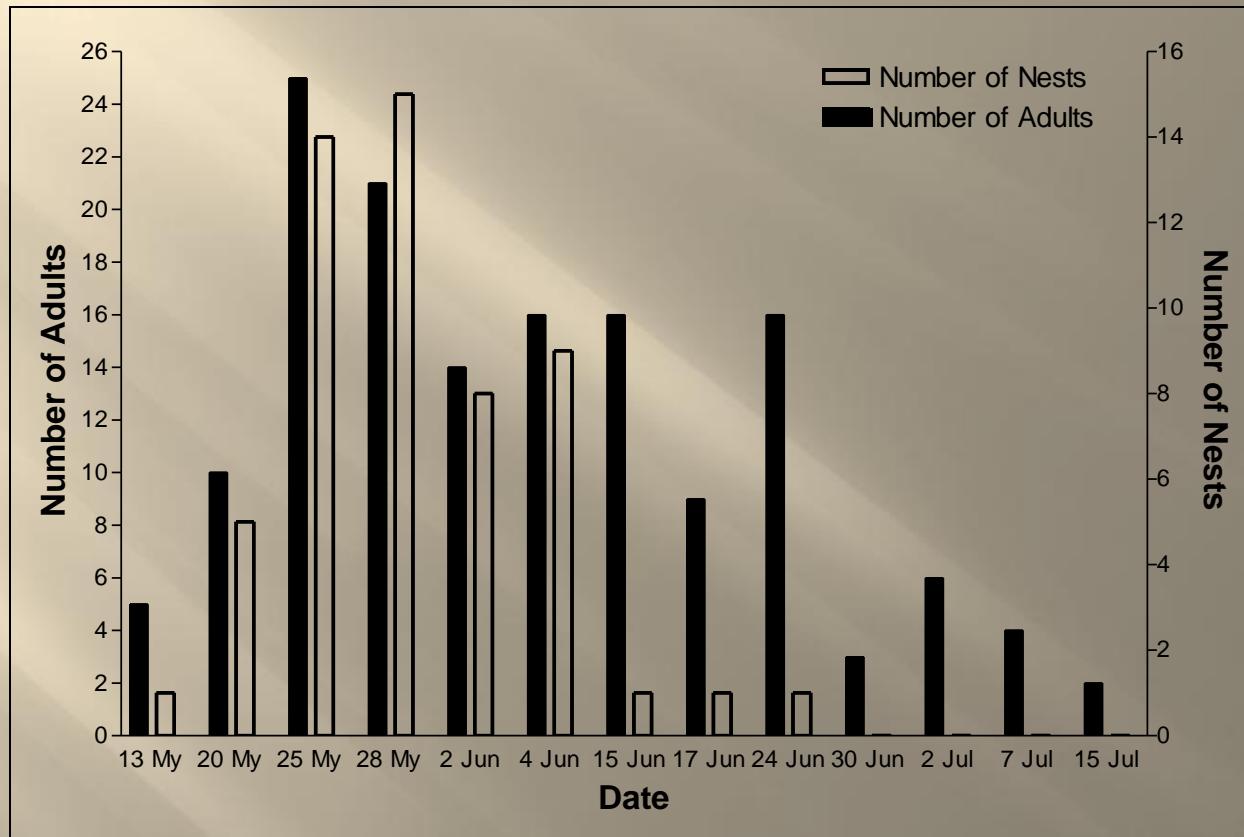
Total (on-river and off-river) number of Piping Plovers recorded during the mid-summer survey



## Abundance: number of nests



# Abundance: number of adults and nests (per visit-per site)



## Productivity

Fledge ratio (# fledglings/nest)

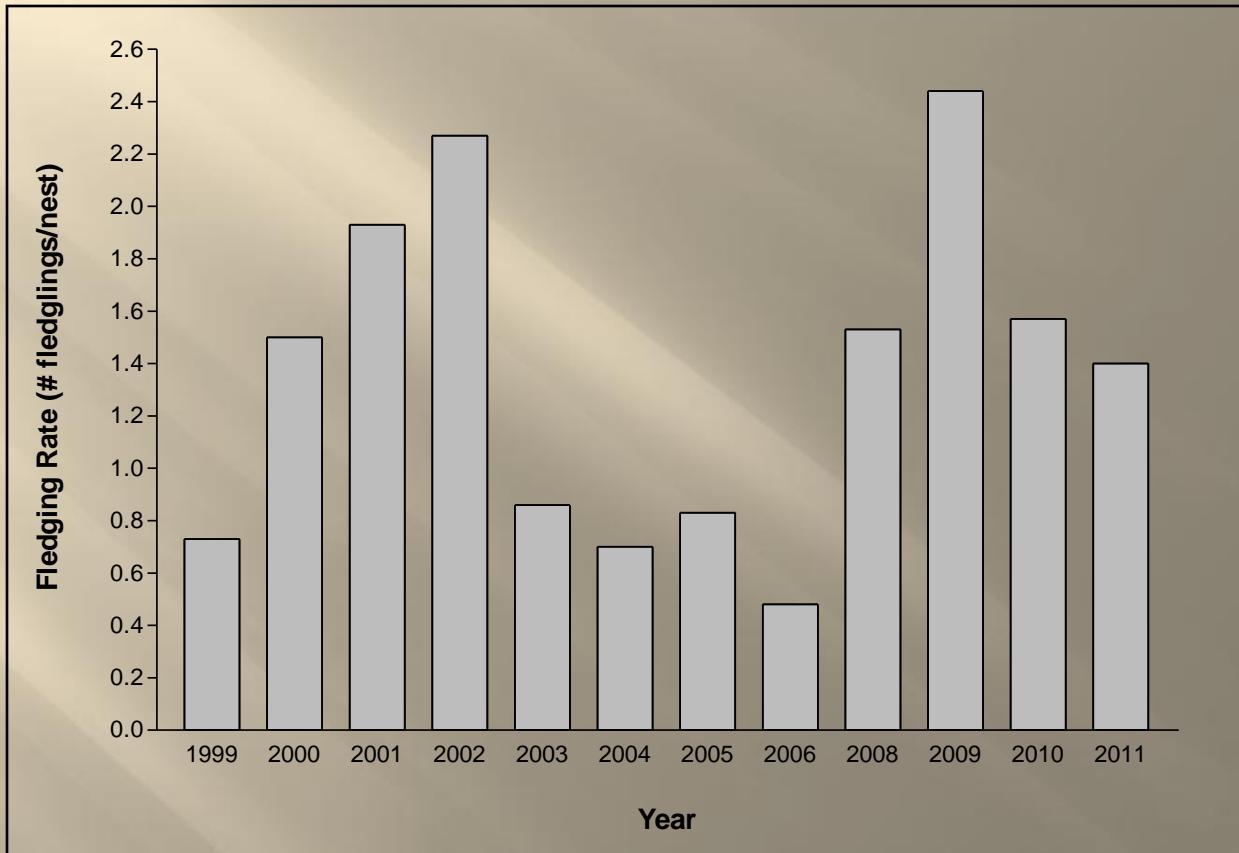
Survival estimates (based on color-marked individuals)



## Fledge ratio (# fledglings/nest)

Year	Fledging Rate	Number of Adults	Number of Nests
1999	0.73/nest	38	12
2000	1.50/nest	80	43
2001	1.93/nest	59	32
2002	2.27/nest	62	21
2003	0.86/nest	84	28
2004	0.70/nest	79	42
2005	0.83/nest	60	22
2006	0.48/nest	52	33
2007	---	80	40
2008	1.53/nest	61	63
2009	2.44/nest	70	80
2010	1.57/nest	97	42
2011	1.40/nest	105	49

## Fledge ratio (# fledglings/nest)



# Survival estimates (based on color-marked individuals)

## Adults

Year	Combined		Mines		Housing	
2008	0.584 0.205		---		---	
2009	0.391 0.079		---		---	
2010	---		0.776 0.051		0.579 0.041	
2011	---		0.631 0.132		0.624 0.098	

## Chicks

Year	Combined		Mines		Housing	
2008	---		---		---	
2009	0.299 0.187		---		---	
2010	---		0.015 0.164		0.517 0.085	
2011	---		0.118 0.145		0.754 0.322	

## Nests

Year	Combined	
2008	0.919	0.055
2009	0.701	0.087
2010	0.723	0.087
2011	0.774	0.070

## Additional Information Needs

Movement between on-river and off-river nesting habitats  
Recruitment (local-regional-range wide)  
Survival estimates



## Threats

Alterations to Lower Platte River that modify availability of sandbar nesting habitat

Availability of human-created off-river nesting habitat



